THE OFFICE OF ENTERPRISE TECHNOLOGY STRATEGIES

Statewide Technical Architecture

Maturity Review Plan

STATEWIDE TECHNICAL ARCHITECTURE

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Maturity Review Plan

The Statewide Technical Architecture can only guide the State's IT decisions and meet the needs of the enterprise if, through the evaluation of metrics, it is having the desired effects, it is implemented, and it is current.

This document outlines a plan for periodic reviewing of the effectiveness of the Statewide Technical Architecture to establish point-in-time conditions from which action plans will be developed.

According to META Group, "Successful Global 2000 (G2000) organizations have learned the establishment of a set of best-practice architecture capabilities is a critical factor in driving a sustainable enterprise architecture (EA) process implementation." One of the key traits of mature-architecture organizations, from government agencies to commercial companies, is looking to become more efficient and effective by moving up the capability scale. Developing a thorough understanding of the enterprise, through the continual assessment of architecture maturity, increases the potential value of an EA program. An enterprise's context (history, culture, processes, people, technology) provides valuable clues about when, where, and how to advance an EA program. Therefore, a key strategy is to leverage knowledge of that context and, where possible, take steps to improve it thereby advancing the EA program.

An Architecture Maturity Review (AMR) identifies an enterprise's context (history, culture, processes, people, and technology) at a point-in-time in a disciplined and repeatable manner. Upon identification of an enterprise's strengths and weaknesses, action plans are developed and appropriate remedies are applied to make the environment more favorable for growth; enhancing the overall maturity of the enterprise. Integral to the State's Enterprise Architecture (EA) efforts are implementation of the rigorous AMR program outlined below. Upon careful analysis of available options, the META Group Enterprise Architecture Maturity Review process was adopted with minor adaptations to the State of North Carolina business model.

Requirement

The State of North Carolina was one of the first states to recognize that an open, vendor-neutral systems approach to building technology infrastructure would benefit the state through achieving economies of scale and greater interoperability and data sharing among state agencies. In response to these drivers and legislation the state's Enterprise Technology Strategies (ETS) Office (a division of Information Technology Services (ITS)) developed the Statewide Technical Architecture (STA) – a central component of an Enterprise Architecture Program. This enables agencies to make better decisions about deploying technology resources. Its purpose is to provide a framework of principles, practices, and standards that direct the design, construction, deployment, and management of information systems. It helps agencies develop and participate in a technology infrastructure that can cost effectively support rapid change in business and administrative processes across the State.

Periodic reviewing can help in assessing how well the STA approach meets the business and legislative requirements. An enterprise's Architecture Maturity is measured through the Review of an enterprise's history, culture, processes, people, and technology in a disciplined and repeatable manner. By identifying an enterprise's strengths and weaknesses, appropriate remedies may be applied to make the environment more favorable for STA growth, enhancing the overall maturity of the enterprise.

In order to ensure the applicability and viability of the STA, an assessment must be performed regularly to measure its maturity. To ensure full coverage and viable feedback, both internal and third-party external reviews are recommended with each providing validation criteria to the architecture team-how often? Is there currently a review time established, or do we need to establish a time?

Overview

What then is an Architecture Maturity Review (AMR) and what does it encompass? Organizations with well-intentioned architecture efforts are often not prepared for the realities they will face. Eager to achieve results, Architecture Teams (AT) immediately employ technology based solutions and processes only to see efforts stall on completely unrelated dynamics like organizational consensus. The AMR process assesses all the areas and functions that impact the architecture process. Moreover, a well designed and implemented AMR process will evaluate an organization throughout the life-cycle of the process, informing them when they are postured for success at the inception, and how they are progressing along the path to full realization of the benefits. The keys to a successful AMR are what to assess, how often, by whom and with what evaluation criteria.

The State's approach, outlined in detail below, recommends annual reviews, using defined assessment areas and consistent evaluation criteria, to be conducted by internal review teams and at least once each three years by an external third-party, non-biased review team (See Table 1). The resulting recommendations are provided to the leadership to guide their effort in focusing resources on areas needing attention, based on META Group's context of the continuous improvement process.

Implementation Approach

AMR's will be conducted with clear guidelines, efficient processes and clear evaluation criteria. As META Group states, the EA is a "creative" process, and care must be taken to avoid complex/unwieldy procedures and committees too large for effective and frequent dialog. The process must move quickly and efficiently; time and workload must be the critical elements. Business and technical leaders universally abhor onerous processes and will fail to participate effectively in them. As such, the assessment will focus on the following.

Evaluation Criteria - Architecture Maturity Indicators

Assessing the maturity of any organization to successfully complete an EA process involves examining the following indicators. These indicators have been defined with the entire architecture process in mind but are only the critical elements to be assessed; additional elements may be added as they pertain to the specific departments or agencies:

- Government Business Linkage
- Executive Management Involvement
- Agency Participation
- Management Oversight and Compliance Process
- Technology Investment and Procurement Processes
- Architecture Process Definition
- Architecture Development
- Architecture Communication
- Enterprise Program Management
- Associated Architectures / Holistic EA

See Appendix A (Indicators) for a complete description of these indicators, their roles, and development / improvement criteria as the process goes forward.

Review Timelines (See Table 1):

AMRs provide value at various times throughout the EA process evolution:

- **Before Beginning an EA program:** This helps the architect create a climate in which EA concepts will be most readily accepted. The output of the architecture maturity review reveals the readiness of the organization for proceeding and those areas needing special emphasis.

- **Annually, as the EA practice advances:** This helps surface additional factors that may inhibit EA development or implementation, focuses or redirects available resources, generates support for follow-on architectures, and provides a scorecard on overall processes. This process would alternate with initial efforts reviewed by an internal review authority and within three years an external vendor review would be conducted performing a complete evaluation. As the process matures, third-party evaluations should be scheduled as necessary but no later than once every three years.

As an Enterprise Architecture Program, this plan will focus on annual reviews using planning criteria similar to this example 6 year period:

MATURITY REVIEWS	Initial	Year 2	Year 3	Year 4	Year 5	Year 6
Enterprise/Internal Review	X	X		X	X	
External Vendor Review			X			X

Table 1. Review Planning

Review Procedures

Enterprise Technology Strategies will perform self-directed Architecture Maturity Reviews on an annual basis. Every three years Enterprise Technology Strategies will contract with an outside vendor to provide an independent, more thorough review. Internal reviews will focus on AMR levels (as shown in Table 2) and associated findings and will be reviewed and approved by the State CIO. External reviews will be performed based on a more detailed review of all the associated processes, procedures and resources being consumed; these reviews will be approved by the IRMC.

Agency cooperation is essential to the success of the review. An integral factor in the analysis (review) is the assessment of agency adoption and use of the components of the STA. This too is measured and will be included in the annual reports. In addition, AMR findings will be presented to the CIO Council.

Findings with action plans for external reviews will be presented to the TAPCC and IRMC for review and approval.

REVIEW PROCEDURES	Arch Procedures	Dedicated Resource Levels	Assess AMR Levels	Produce Findings Report	CIO Approval	IRMC Approval
Enterprise/Internal Review			**X**	**X**	**X**	
External Vendor Review	**X**	**X**	**X**	**X**	**X**	**X**

Table 2. Review Procedures

Evaluation Methodology

Each indicator is evaluated based on the level each indicator has achieved. The levels achieved can be associated with the growth schematic META Group developed as shown in Figure 1 (The Architecture Improvement Matrix). It articulates the levels each architecture effort must go through before a self-achieving status can be reached. (See Appendix C for threshold criteria details for the various levels)

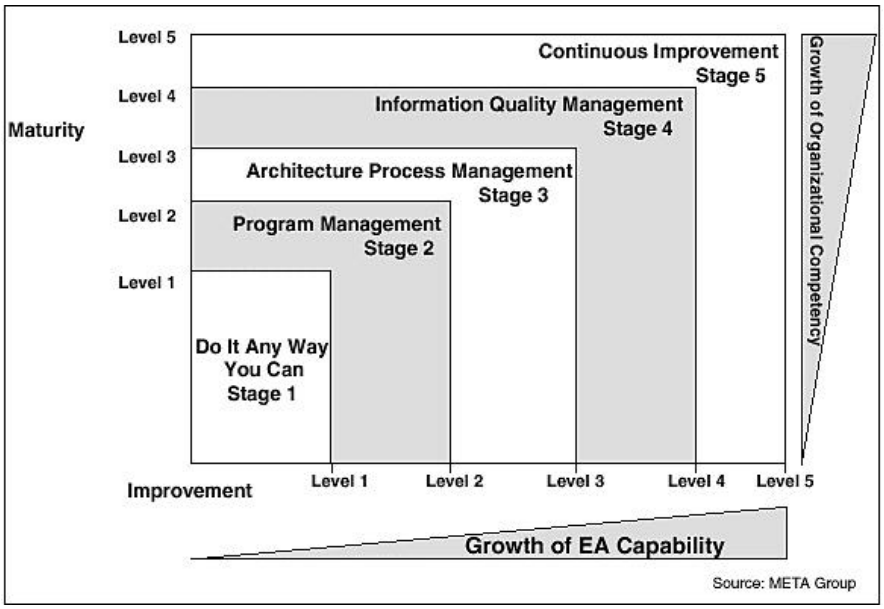

Figure 1 – The Architecture Improvement Matrix

The level is determined by the answers to a specifically designed set of questions (See Appendix B (Indicator Evaluation Criteria)) and the numeric summation for each indicator. This is then plotted based on current capabilities and desired future posture to give a graphic assessment of status (See Figure 2, Kiviat Diagram - Architecture Maturity Review Result Example). The delta between current and target maturity levels provides focus for future efforts.

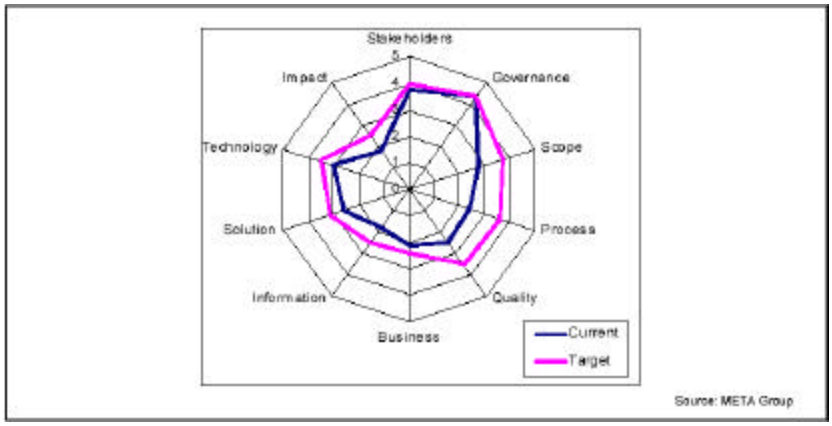

Figure 2 – Kiviat Diagram - Architecture Maturity Review Result Example

Reporting

Final reports combine the numeric evaluation of levels achieved, the descriptions of indicator capabilities along with other tangible inputs such as resource allocation and/or development of complimentary architectures to provide a substantive direction and recommendation for the focusing of resources to achieve forward movement as the process continues. Not all indicators can be improved continuously as the process is initiated therefore resource decisions are required. As the process "matures," more indicators will reveal areas where the top level of maturity, continuous improvement, is possible.

Reporting will be designed to meet executive feedback needs with final results being provided to all involved through CIO review/approval of internal reviews and IRMC review and approval of the external reviews. In the case of each review, a subsequent meeting, post issuance of the reporting data, will be held by the CIO and IRMC to discuss the results, review the recommended action plan, and focus future priorities and direction.

Conclusion

Information technology is increasingly becoming a major business value enabler that will yield faster return on investments if it is developed following a well-structured architecture practice. An architecture maturity review should be undertaken alongside the enterprise architecture process so that the architecture's business value can be realized. Organizations are highly dependent on information technology to achieve their objectives. Overwhelming evidence supports that a fundamental understanding of an organization architecture maturity level is needed to advance quickly to a business-aligned enterprise architecture. This plan provides a comprehensive, credible, and feasible construct for the implementation of an enterprise maturity review plan.

This plan will be reviewed bi-annually, or at the direction of the IRMC, and updates provided once approved by the IRMC.

APPENDIX A (INDICATORS) to MATURITY REVIEW PLAN (Supplied by META Group)

ARCHITECTURE MATURITY INDICATORS

Prerequisites	Description
Government Business Linkage	Government Business Linkage refers to the extent to which any architecture effort is linked to Agency business strategy. The discovery and validation of business strategy requires knowing the thinking processes of the business experts from whom future business requirements are elicited. Collaborative work in groups that include customers is most effective in the early life-cycle phases of planning/requirements analysis as well as for ongoing architecture process improvement. Such collaborative work patterns can be used to effectively model business strategy and derive higher-quality requirements, which include future business requirements. In this relationship enterprise architects and government lines of business (LOB) must collaborate to create a business strategy document that is expressed in common sense natural language and that is directly relevant to the business.
Executive Level Involvement	A motivated executive level team is the primary key to architecture success. If the will exists, ways can be found to make the architecture process more scalable; overcome or adjust to tight budgets; or try a better way to market the architecture process. Enterprise Architecture efforts demand high level participation because it is an ongoing process, takes time and perseverance to pay off, and requires clear direction. EA is a life sentence. Additionally, a cohesive enterprise business vision, communicated effectively, is the foundation for a successful EA effort. This is developed through an IT team and leadership dialogue. Finally, the leadership must consistently send the right signals in reward/advancement programs, compensation, etc to properly motivate the kind of behaviors that will facilitate success.
Agency Participation	Mastering the process of navigating cultural, organizational, and political barriers and achieving broad consensus across IT and government business organizations is a key trait of organizations that successfully implement EAs. These organizations have learned that process creation to gain approval, sign-off, and continued forward movement requires multiple layers of participation within the organization.
Management Oversight and Compliance Process	A deliberately designed management oversight team with appropriate executive and senior level management membership is essential to a successful, ongoing architecture effort. This entity assures successful processes are institutionalized and compliance mechanisms are implemented across the enterprise. Essential to successful implementation is consensus on management team membership and a developed set of operating rules for the team. Membership should be represented from the enterprise level by the Agency's senior management to include CIO level positions.

APPENDIX A (INDICATORS) to MATURITY REVIEW PLAN **(Supplied by META Group) - CONTINUED**

ARCHITECTURE MATURITY INDICATORS (Cont)

Prerequisites	Description
Technology Investment and Procurement	The objective is to deepen the penetration of architecture content into daily operational activities. Technology investment decisions, even nominal upgrades, must be guided by architecture process/content. Many state-of-the-architecture efforts are derailed by purchasing processes that are inconsistent with overall architecture direction. Purchasing agents and their associated workflow must be folded into the architecture processes and oversight mechanisms established to assure consistency over time.
Architecture Process Definition	Process definition is a high-level model definition of the EA process that needs to be understood by all executive, senior and technical business and IT managers and includes descriptions of: • Static structure of its composition and relationships through the organization. • Rationale for how the processes address the needs of the supported governmental function. • References to standards/methods that are tied to or assumed by the architecture, whether mandated or chosen as foundation principles. • High level dynamic behavior of the process showing how the components work together and synchronize their work overtime – this is especially important for large, complex processes. • A refinement of the structure and behavior showing allocations and relationships to actual organizational elements. This is especially important in government as not all elements share common structures or even goals.
Architecture Development	The key to EA success is not the final product, but the process an organization follows to create it. The process consists of five steps, which link an enterprise to its competitive, market and strategic environments. The architectural process is superior to classic systems development methodologies because it has the following capabilities: • Builds a bridge across the enabling technologies. Architecture is the breadboard designers use to develop integrated systems. • Links government business strategy with technology strategy. • Anticipates future requirements • Encourages continual refinement. Processes keep business and IT engaged as requirements change or IT technology evolves, thus assuring a consistently high performing enterprise.
Architecture Communication	Communicating what an EA is and how it will benefit the organization, along with the specific tenets of individual architectures, is essential. The enterprise must be engaged at a variety of levels and throughout a variety of positions to ensure the appropriate degree of interest and understanding is maintained over time. A variety of mediums and mechanisms should be employed to assure proper coverage to a diverse, geographically dispersed government community.

APPENDIX A (INDICATORS) to MATURITY REVIEW PLAN **(Supplied by META Group) - CONTINUED**

ARCHITECTURE MATURITY INDICATORS (Cont)

Prerequisites	Description
Enterprise Program Management	Industry studies have confirmed the requirement for a mature program management capability within the enterprise. An Enterprise Program Management Office (PMO) focuses the program managers on the core architecture requirements and facilitates compliance through: • Engaging program managers in architecture development. • Coordinating changing product or function configuration. • Capturing lessons learned in the PMO. • Increasing PMO visibility and effectiveness. • Enhancing the professional development of program managers. All these "best practices" of an enterprise PMO can be facilitated through the development and implementation of enterpris e caliber techniques and procedures. With the PMO as the focal point, program managers have an outlet to help them understand for how best to perform and how they should perform.
Associated Architectures/ Holistic EA	The focus of EA is broadening the architecture effort beyond the Technical Architecture. By including government specific business and information architectures along with application portfolio planning the entire effort is extended to include all critical attributes of the organization. Expanded EA processes allow for more sophisticated analysis and employment of modeling tools. Most importantly, an expanded EA effort deliberately involves all functional areas in the organization effecting a more focused, better integrated enterprise team prepared for the future and able to address the associated uncertainty and risk inherent in enterprise level planning and operations.

APPENDIX B (Indicator Evaluation Criteria) to MATURITY REVIEW PLAN **(Supplied by META Group)**

Government Business Linkage: The extent to which the architecture effort is linked to business strategy.

Questions	Current	Target
To what extent is the business involved in development of an EA in the organization?		
Level 1: No or limited business involvement in the architecture process		
2: Limited business involvement in the architecture process		
3: Direct business involvement in the architecture process		
4: Business-owned architecture process		
5: Business strategy managed by the EA process		
To what extent is the business strategy represented in the EA?		
Level 1: No or limited business strategy reflected in the architecture		
2: Essential elements (key business drivers) of bus. strategy in the EA		
3: Entire business strategy represented in the EA		
4: Business strategy managed by the EA process		
5: Periodic re-examination of business strategy		
To what extent is the architecture effort representative of the entire Organization?		
Level 1: No enterprise wide architecture effort		
2: Limited organization involvement		
3: High level of organization involvement		
4: Cross-EA involvement		
5: Entire organization represented in the architecture effort		
Is there an established architecture process?		
Level 1: Architecture process not established		
2: Process defined, but not established		

Questions	Current	Target
3: Architecture process defined and acted on		
4: Architecture process managed across the organization		
5: Value of EA measured across the entire holistic EA process		
What role is the IT organization playing in developing an EA?		
Level 1: Very much an IT exercise that is not repeatable – ad hoc		
2: Business linkage process established beyond the IT organization		
3: IT is the owner of the EA process		
4: IT is managing the EA process through technology implementation		
5: IT delivers business process optimization through the EA process		
TOTAL (sum of level for each question divided by 5)		

Executive Level Involvement: A motivated executive level team is the primary key to architecture success

Questions	Current	Target
To what extent are the executives involved in the establishment and ongoing development of an EA practice?		
Level 1: No or limited executive awareness in the architecture process		
2: Occasional/selective executive involvement with degrees of commitment/resistance		
3: Executive team supportive of the enterprise wide architecture process		
4: Executive team directly involved in the architecture review process		
5: Executive team directly involved in optimization of process		
To what extent can Executives articulate the value of EA?		
Level 1: No or limited understanding of the value of EA		
2: Limited understanding of EA value by executives		
3: Increasing level of awareness of the value of EA effort		
4: Ongoing discussions on the value of EA by executive team		
5: Implicit understanding of the value of EA by executive team		
To what extent do Executives articulate future business strategies using the EA process?		
Level 1: No or limited communication to the EA team on future bus strategy		
2: Occasional communication to the EA team on future bus strategy		
3: Regular communication to the EA team on future business strategy		
4: Periodic EA team involvement in establishing future bus strategies		
5: EA team is directly involved in establishing future bus strategies		
To what extent do executives subscribe to the management oversight as set out in the EA process?		
Level 1: No or limited agreement with management oversight plan		
2: Various degrees of understanding of the proposed mgt oversight plan		

Questions	Current	Target
3: Supportive of architecture standards and required compliance		
4: Executives own the compliance process for architecture standards		
5: Executive team maintains management oversight structure – owns EA standards		
TOTAL (sum of level for each question divided by 4)		

Agency Participation: Achieving broad consensus across IT and Agency level organizations is a key trait of organizations that successfully implement EAs.

Questions	Current	Target
To what extent are the various agencies in the organization involved in the establishment of and ongoing development of an EA practice?		
Level 1: No or limited agency awareness in the architecture process		
2: Occasional/selective agency involvement with degrees of commitment/resistance		
3: Most Agencies supportive of the enterprise wide architecture process		
4: Most Agencies directly involved in the architecture review process		
5: Most Agencies directly involved in architecture improvement		
To what extent can every Agency articulate the Value of EA to its business?		
Level 1: No or limited understanding of the value of EA, resistance because of impact of EA		
2: Limited understanding of EA value		
3: Growing number of Agencies agree to value of EA effort		
4: Ongoing discussions on the value of EA across agencies		
5: The value of EA being driven by all agencies		
To what extent do Agencies understand that standardization across the enterprise holds great value?		
Level 1: No or limited agreement to enterprise wide standardization		
2: Individual agencies underwriting standards they agree with		
3: Widespread agreement on standards, enough to reduce complexity		
4: Agency wide agreement on architecture standards		
5: All agencies actively seeking/supporting architecture standards		
To what extent does Agency management subscribe to the management oversight structure as set out in the EA process?		
Level 1: No or limited agreement with management oversight plan		
2: Various degrees of understanding of the proposed mgt oversight plan		

Questions	Current	Target
3: More widespread agreement to enterprise wide compliance process		
4: Most Agencies participate actively in an agreed-to compliance		
5: All Agencies support and drive an oversight structure and compliance process		
TOTAL (sum of level for each question divided by 4)		

Management Oversight and Compliance Process: The creation of a governance structure and a compliance process is essential to a successful ongoing architecture effort.

Questions	Current	Target
Is there an established management oversight structure (framework) and reporting line?		
Level 1: No or limited oversight reporting implemented		
2: Limited oversight understanding across the organization		
3: Cross-enterprise oversight processes defined		
4: Executives and Agencies agree to oversight structure		
5: Oversight used as optimization tool across the enterprise		
To what extent are the various Agencies in the organization involved in the establishment and ongoing development of a compliance process?		
Level 1: No involvement		
2: Limited involvement from some Agencies		
3: Direct involvement of agencies in process definition		
4: Agencies directly control the outcomes of the compliance process		
5: Agencies own the compliance process for their respective businesses		
To what extent is the oversight structure and compliance process transparent and is disclosure handled effectively?		
Level 1: No or limited oversight and compliance in place		
2: Management enforced oversight/no transparency		
3: Oversight defined and compliance implemented		
4: Managed disclosure and compliance		
5: Compliance process optimized across the organization		
To what extent is accountability for management oversight and compliances shared across the enterprise?		
Level 1: No or limited management oversight plan		
2: Management enforced oversight		

Questions	Current	Target
3: Compliance process defined to be enterprise wide		
4: Oversight and compliance in place across the organization		
5: Oversight accountability used as an optimization tool across the enterprise		
TOTAL (sum of level for each question divided by 4)		

Technology Investment and Procurement: Technology investment decisions must be guided by an EA process/content and procurement decisions must be guided by the resultant standards.

Questions	Current	Target
To what extent is the procurement of technology driven by an EA process?		
Level 1: No architecture process and no technology procurement strategy		
2: Limited EA involvement in procurement process by the EA team		
3: Technology standards defined by the EA team, and a compliance process is in place		
4: EA standards applied when procuring technology		
5: Enterprise wide/Centralized procurement of technology		
Is the expenditure of technology seen as an investment?		
Level 1: No enterprise wide technology procurement strategy		
2: Technology procurement done on an Agency level basis		
3: EA defined technology strategy for technology deployment		
4: Cross-Enterprise technology procurement according to EA standards		
5: Technology is seen as a enterprise wide asset and investment		
To what extent is accountability for technology investment shared across the enterprise?		
Level 1: No enterprise wide technology procurement strategy		
2: Technology procurement done on an Agency level basis		
3: Technology standards defined by the EA team, and a compliance process is in place		
4: Cross-Enterprise technology procurement according to EA standards		
5: Enterprise wide/Centralized procurement of technology vision shared by the entire organization		
Is technology procurement a centralized or decentralized process, and is it driven by a oversight structure and compliance process?		
Level 1: No enterprise wide technology procurement strategy or oversight structure in place		

Questions	Current	Target
2: Technology procurement done on an Agency level basis		
3: Technology standards defined by the EA team and maintained by a compliance process – procurement is decentralized but according to a set of EA standards		
4: Cross-enterprise technology procurement according to EA standards		
5: Enterprise wide/Centralized procurement of technology vision shared by the entire organization		
TOTAL (sum of level for each question divided by 4)		

Architecture Process Definition: The extent to which the definition of the EA process is understood by all managers.

Questions	Current	Target
To what extent is the business involved in the definition of an EA process in the organization?		
Level 1: No or limited business involvement in the architecture process		
2: Limited business involvement in the architecture process		
3: Direct business involvement in the architecture process		
4: Business-owned architecture process		
5: Business involved in the optimization of the EA process definition		
To what extent is the definition of the EA process accepted by the business?		
Level 1: No or limited business acceptance		
2: Limited business acceptance of the EA process definition		
3: Major Agencies show acceptance of the EA process definition		
4: The entire business accepts the EA process definition		
5: The EA process definition forms part of the ongoing business optimization		
To what extent is the EA process definition phase an effort representative of the whole organization?		
Level 1: No enterprise wide definition effort		
2: Limited organization involvement		
3: High level of organizational involvement		
4: Cross-Enterprise architecture involvement		
5: Entire organization represented in the architecture effort		
Is there an established architecture process?		
Level 1: Architecture process not established		
2: Process defined, but not established		
3: Architecture process defined and acted on		

Questions	Current	Target
4: Architecture process managed across the organization		
5: Value of EA measured across the entire holistic EA process		
TOTAL (Sum of level for each question divided by 4)		

Architecture Development: The key to EA success is not the final product but the development process an organization follows to create it.

Questions	Current	Target
To what extent is the architecture development in the organization driven by a well established process?		
Level 1: No defined process used for an EA development		
2: Limited enterprise wide understanding of the EA process, mostly used in the IT organization		
3: Increasing enterprise wide awareness of the EA process		
4: A well established enterprise wide EA process		
5: Continues optimization of the enterprise wide EA process		
To what extent are the executives of the organization involved in the establishment and ongoing development of an EA process?		
Level 1: No or limited executive awareness in the architecture process		
2: Occasional/selective executive involvement with degrees of commitment/resistance		
3: Executive team supportive of the enterprise wide architecture process		
4: Executive team directly involved in the architecture review process		
5: Executive team directly involved in optimization of process		
To what extent is the EA development process used by executives and managers to articulate future business strategies?		
Level 1: No or limited communication to the EA team on future bus strategy		
2: Occasional communication to the EA team on future bus strategy		
3: Regular communication to the EA team on future business strategy		
4: Periodic EA team involvement in establishing future bus strategies		
5: EA team is directly involved in establishing future bus strategies		
Is there an established architecture process?		
Level 1: No or limited agreement with management oversight plan		
2: Various degrees of understanding of the proposed mgt oversight plan		

Questions	Current	Target
3: Supportive of architecture standards and required compliance		
4: Executives own the compliance process for architecture standards		
5: Executive team maintains an enterprise wide management oversight structure (ownership of EA standards)		
TOTAL (Sum of level for each question divided by 4)		

Architecture Communication: Communicating *what* an EA is and how it will benefit the organization is paramount to its success.

Questions	Current	Target
To what extent are the decisions of EA practice documented?		
Level 1: No or limited documentation available		
2: Architecture notebook is in use in the IT organization but is not updated regularly and new hires are not necessarily brought in line with architecture decisions		
3: Architecture notebook in use across organization but not updated regularly		
4: Architecture notebook in use across organization and in step with latest architecture developments/standards		
5: Architecture notebook in use by every decision maker in the organization for every business decision		
To what extent are other methods/tools of communications used?		
Level 1: No communications tools used		
2: Regular EA presentations at management meetings		
3: Architecture presentations held at various Agencies		
4: Ongoing education on the value of EA across agencies		
5: Various education/communication tools utilized across all agencies		
To what extent is the content of the EA process made available electronically to everybody in the organization?		
Level 1: No electronic means of communication		
2: Occasional updates published via E-mail		
3: More widespread electronic publication of standards		
4: An online Web Site is used to force communications across the organization		
5: All agencies are actively involved through electronic updates and web chat rooms		
To what extent is architecture education done across the business on the EA process and contents?		
Level 1: No or limited education		

Questions	Current	Target
2: Architecture education done for IT staff		
3: More widespread education done across various agencies		
4: Most agencies participate actively in EA education		
5: All agencies monitor staff education and understanding		
TOTAL (Sum of level for each question divided by 4)		

Enterprise Program Management: Industry studies confirm the need for an Enterprise level PMO.

Questions	Current	Target
Is there an established enterprise program management (PM) function?		
Level 1: No or limited program management functions		
2: Limited PM functions performed in the IT Organization		
3: Agency level defined PM functions established		
4: Executives and agency agreed to enterprise wide PM functions		
5: Enterprise wide PM is established as a technology investment optimization tool across the organization		
To what extent are planning and scheduling activities linked to time-based architecture development?		
Level 1: No linkage		
2: Limited linkage within the IT organization		
3: Direct linkage from a technology decision perspective		
4: Executive management linkage between business decisions and architecture development		
5: Direct and Optimized linkage between technology investments and business driven EA development		
To what extent are the staff/skill requirements for new technology investment driven by the EPMO?		
Level 1: No or limited guidance		
2: Skill requirements established but not enforced by a process		
3: A staff/skill education structure defined and implemented		
4: Managed education and architecture-linked employment process established across all agencies and IT functions		
5: Employment practice in place that is optimized/updated according to the progress made by time-based architecture development		
To what extent has the organization adopted methodologies to reduce technology risks, specifically the "gate" approach?		

Questions	Current	Target
Level 1: No review in place		
2: EA Team involved in IT infrastructure decisions		
3: An enterprise wide program/project review established		
4: The risk review gate process accepted for all projects embarked upon by the enterprise		
5: All new programs defined with predetermined review gates and feedback from these gates monitored at executive level		
TOTAL (Sum of level for each question divided by 4)		

Associated Architectures / Holistic EA: The focus is about broadening the reach of the architecture effort beyond the EWTA.

Questions	Current	Target
To what extent is a holistic EA approach followed?		
Level 1: Only a technical architecture is in place		
2: Limited business and information requirements documented as part of the EWTA development		
3: A high level business architecture is defined with specific reference to business models and processes as well as an information architecture defining the flows of information across various business processes		
4: An application portfolio has been established driving future business solutions		
5: A fully populated enterprise solutions portfolio is replacing the application portfolio		
To what extent is enterprise business modeling an automated competency of line manager and staff?		
Level 1: No modeling competency exists		
2: Limited business modeling is done on an agency basis		
3: Enterprise wide business modeling is done		
4: Each agency management has the competency to drive business modeling and process optimization		
5: Enterprise business modeling is the competency of line management and staff and models are well documented		
To what extent is accountability for knowledge management shared across the enterprise?		
Level 1: Only a technical data architecture defined		
2: Information requirements document as part of the EWTA		
3: A separate high-level information architecture defined		
4: A well-defined process for sharing information across the enterprise is in place		
5: Enterprise wide knowledge management portfolio has been defined and maintained		

Questions	Current	Target
Is EA a centralized or Decentralized process, and is it driven by a oversight structure and compliance process?		
Level 1: No organization wide EA process in place		
2: Only oversight for technology procurement done on an agency basis		
3: Organization wide EA process defined but executed decentralized in IT and various agencies		
4: Cross-enterprise EA execution according to a well-established oversight structure		
5: Enterprise wide EA optimized to enable the future strategies of the organization		
TOTAL (Sum of level for each question divided by 4)		

APPENDIX C (Architecture Maturity Levels) to MATURITY REVIEW PLAN

Stage	Characteristics
Level 1: Initial "Do it any way you can."	Processes are ad hoc and occasionally chaotic. Few processes are defined and success depends on individual effort and heroics. Quality of work is unpredictable. Little communication exists about the process and possible process improvements.
Level 2: Repeatable "Program Management"	Basic project management processes are established to track cost, schedule and functionality. Individual tasks are defined and documented. A process discipline is in place to repeat earlier successes on projects with similar applications. The process results are predictable, though not necessarily of high quality.
Level 3: Defined "Architecture Process Management"	Process is defined, with standardized results. Management and engineering processes are documented and integrated into a standard set of processes. Projects use an approved, tailored version of the organization's standard set of processes.
Level 4: Managed "Information Quality Management"	Process parameters are defined and quantified. Detailed measures of enterprise processes and product quality are collected. Processes and products are quantitatively understood and controlled.
Level 5: Optimizing "Continuous Improvement"	Continuous process improvement is aided by quantitative feedback from the process and from piloting innovative ideas and technologies.